

AMENDMENTS TO THE CLAIMS

Kindly add newly presented claims 30-38 as shown in the listing of claims below.

1 30. A multilayer optical fiber coupler, comprising:

2 a first layer, said first layer having one or more fiber sockets formed by photolithographic
3 masking and deep reactive ion etching to extend through said first layer, said fiber socket
4 sized to receive and align an optical fiber therein.

1 31. The optical fiber coupler of claim 30 wherein said one or more fiber sockets include two or
2 more fiber sockets.

1 32. The optical fiber coupler of claim 30, further comprising a second layer affixed to said first
2 layer.

1 33. The optical fiber coupler of claim 32 wherein said optical fiber has an end section that
2 extends through said fiber socket.

1 34. A method for making a plurality of monolithic optical fiber couplers that align an optical
2 fiber that have a predetermined diameter, comprising:
3 photolithographically masking and deep reactive ion etching a first layer to form a plurality
4 of through holes through the first layer, thereby forming a plurality of cylindrical fiber
5 sockets in a predetermined configuration, said fiber sockets having a diameter approximately
6 equal to the diameter of the optical fiber.

1 35. The method of claim 34, further comprising affixing optical fibers into said fiber sockets.

1 36. The method of claim 34, further comprising dicing said first layer into a plurality of chips,
2 said chip including one or more fiber sockets.

1 37. The method of claim 34, further comprising affixing said first layer to a second layer together
2 to provide a composite wafer.

1 38. The method of claim 37, further comprising dicing said composite wafer into a plurality of
2 chips, said chip including one or more fiber sockets.